

## IVF Gebelikler ve Sonuçları

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### GİRİŞ

Yardımcı üreme teknikleri neticesinde elde edilen gebelikler, 1978 yılındaki ilk uygulanişından günümüze giderek yaygınlaşmış ve toplam gebelikler içindeki oranı 2%'ye yükselmiştir (1). Geçen yıllar içerisinde IVF gebeliklerin maternal ve fetal olumsuz sonuçlar ile ilişkisini inceleyen pek çok çalışma yapılmıştır. Olumsuz maternal sonuçlardan gebeliğin hipertansif hastalıkları (gestasyonel hipertansiyon, preeklampsi, eklampsi), gestasyonel diyabet ve preterm doğum en sık üzerinde durulan olgular iken konjenital defektler, düşük doğum ağırlığı ve nörolojik gelişim bozuklukları IVF gebeliklerle en sık ilişki kurulan fetal olumsuz sonuçlardır (2). IVF sürecindeki yüksek östradiol seviyeleri, embriyonun erken dönemde embriyo kültüründe maruz kaldığı çevresel etkenler potansiyel sorumlulardan birkaçı olmakla beraber, infertilite tedavisi alan hasta grubunun spontan gebeliklere kıyasla mevcut komorbiditelerinin sıklığı ve infertiliteye sebep olan etmenlerin yarattığı ek patolojilerin de olumsuz sonuçlara katkı sağladığı düşünülmektedir.

### HORMONAL VE EPIGENETİK DEĞİŞİKLİKLER

Epidemiyolojik temelli yapılan çalışmalardan elde edilen sonuçlara göre Yardımcı Üreme Teknikleri (YÜT) ile elde edilen gebeliklerde fetal gelişim kısıtlılığı, düşük doğum ağırlığı, preeklampsi, preterm doğum ve nadir görülen genetik hastalıkların sıklığı artmaktadır (3,4). Bu sonuçlar araştırmacıları IVF gebeliklerde ortaya çıkan değişiklikler üzerinde çalışmaya yönlendirmiştir. IVF gebelik sürecinde GnRH agonist veya antagonistleri ile uyarılan overlerden toplanan oositlerin in vitro koşullarda sperm ile birleştirilmesi ile elde edilen embriyo, hücre kültüründe belirli bir süre bekletildikten sonra uterusu transfer edilmektedir. Bu süreç boyunca overlerin uyarılması ile overlerden sentezi artan ve ek olarak dışarıdan hazır formda takviye olarak verilen estradiol nedeniyle, spontan gebeliklere kıyasla vücutta suprafizyolojik bir hormon düzeyi meydana gelmektedir. Bu yüksek hormon düzeyine maruz kalan embriyoda ortaya çıkan epigenetik değişiklikler ile implantasyon ve plasentasyon sürecinde aktivasyon gösteren genlerin ekspresyonundaki

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gestasyonel diyabet, koryoamniyonit, konjenital defektler, düşük doğum ağırlığı ve plasental anormallikler gibi bazı riskler artmış görünmektedir. Risk artışına neden olan etmenlere ait pek çok spekülasyon mevcut olup, potansiyel sorumluların risk artışı üzerindeki etkisi netlik kazanmamıştır. Uzun dönem sonuçlar ile ilgili bilgimiz ise oldukça kısıtlı olup kardiyovasküler hastalık riskinde artış üzerinde durulmaktadır. İyi tasarlanmış moleküler ve klinik çalışmalar ile, IVF prosedürünün embriyo, fetüs ve dünyaya gelen çocuklar üzerindeki etkisine ait daha fazla bilgi sahibi olunması gerekmektedir. Mevcut veriler ışığında IVF gebeliklerin takibinde artan riskleri akılda bulundurmak ve olumsuz gebelik sonuçlarının en önemli sorumlusu olan çoğul gebelikleri azaltmak için tek embriyo transferi önerisini uygulamaya gayret etmek büyük önem arz etmektedir.

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